

ABSTRACT OF THE DISCLOSURE

The present invention relates to a substrate processing apparatus and a substrate processing method which are useful for removing a metal, organic materials such as a resist material and etching residues, particles, etc. adhering to the surface of a substrate, such as a semiconductor wafer. A substrate processing apparatus according to the present invention includes: a substrate holder for holding a substrate; a plurality of anodes and cathodes disposed opposite the substrate held by the substrate holder and arranged alternately along at least one direction; a processing liquid supply section for supplying a processing liquid between the substrate held by the substrate holder and the plurality of anodes and cathodes; and a power source for applying a voltage between the anodes and the cathodes.